

Chabot's Solar Clock -- Amphitheater

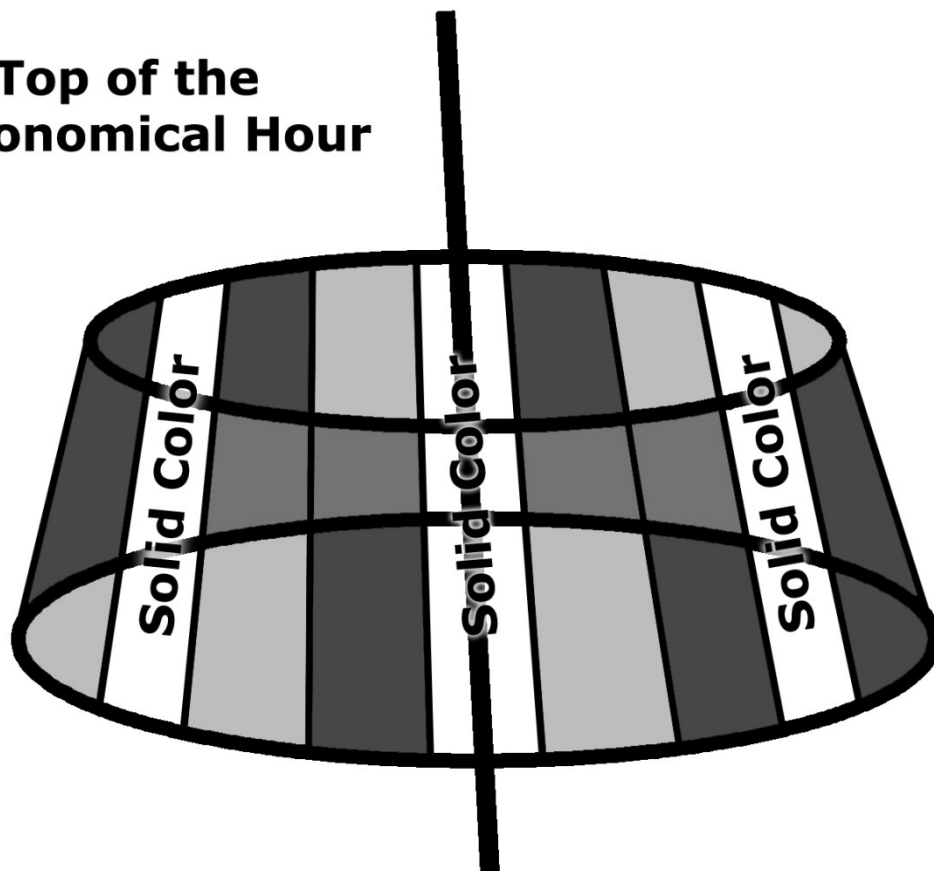
This public art piece is also a functional astronomical clock!

While you *could* tell time by the direction of solar clock's shadow like a normal sundial, the Solar Clock was designed to mark the **astronomical hours** of the day by the **pattern of colors of the shadow** of the glass drum.

Every half hour, the color shadows of the glass panes line up to form lengthwise stripes of solid colors.

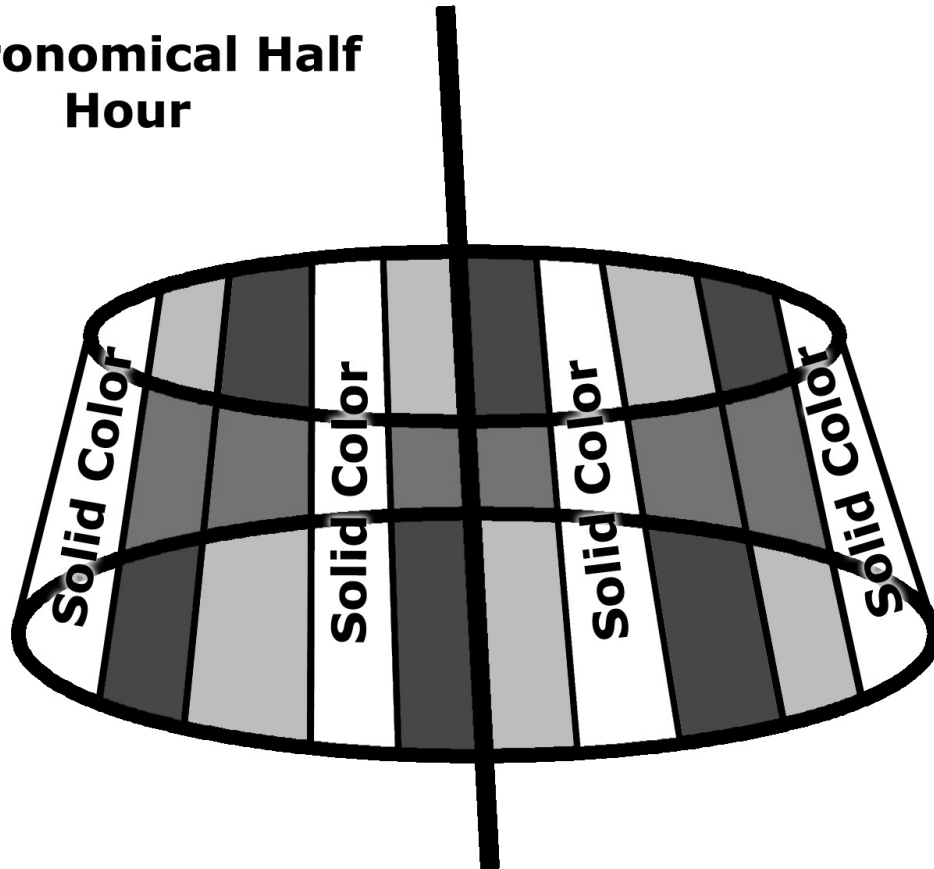
At the "top" of each astronomical hour, **three** solid-color stripes appear in the shadow of the Solar Clock: one stripe at the exact middle of the shadow and two stripes out near opposite edges.

**Top of the
Astronomical Hour**



At the half-hour mark, **four** solid color stripes line up, though none of them are at center.

Astronomical Half Hour



Astronomical Noon

Which hourly alignment indicates **astronomical noon** can be told by noting when the shadow of the pointer pole (the "gnomon") points directly north—the same direction that the actual solar clock is pointing.

Be warned: *astronomical noon* is usually not the same as 12:00 noon as told on a clock—but it is what people regarded as noon before the invention of mechanical timekeepers.

Astronomical noon is the exact moment when the Sun reaches its halfway point in the sky for the day, crossing an imaginary line in the sky that passes overhead and runs north to (called the "local meridian"). Astronomical noon is also the moment

of “high noon”—when the Sun is at its highest point in the sky.

When used to tell time, the Sun is not as regular as a mechanical or electronic clock. At different times of year the Sun can either “run fast” or “run slow”—by as much as 20 minutes! (And, if Daylight Savings Time is in effect, there’s another hour of difference to take into account.)

When is astronomical noon?

While it changes constantly throughout the year, here is a list of the approximate times, as told by your watch, when astronomical noon takes place. Then, the “top” of each hour of the day will be different from your watch by the same number of minutes. (For example, on January 1 astronomical noon is at 12:13 PM PST, so the tops of the hours on that day are 8:13, 9:13, 10:13, 11:13, and so on.)

January 1	12:13 PM PST
January 15	12:19 PM PST
February 1	12:23 PM PST
February 15	12:24 PM PST
March 1	12:22 PM PST
<i>March 15</i>	<i>1:18 PM PDT</i>
<i>April 1</i>	<i>1:13 PM PDT</i>
<i>April 15</i>	<i>1:09 PM PDT</i>
<i>May 1</i>	<i>1:06 PM PDT</i>
<i>May 15</i>	<i>1:06 PM PDT</i>
<i>June 1</i>	<i>1:07 PM PDT</i>
<i>June 15</i>	<i>1:10 PM PDT</i>
<i>July 1</i>	<i>1:13 PM PDT</i>
<i>July 15</i>	<i>1:15 PM PDT</i>
<i>August 1</i>	<i>1:15 PM PDT</i>
<i>August 15</i>	<i>1:13 PM PDT</i>
<i>September 1</i>	<i>1:09 PM PDT</i>
<i>September 15</i>	<i>1:04 PM PDT</i>
<i>October 1</i>	<i>12:58 PM PDT</i>
<i>October 15</i>	<i>12:55 PM PDT</i>
<i>November 1</i>	<i>12:53 PM PDT</i>
November 15	11:54 AM PST
December 1	11:58 AM PST

December 15 12:05 PM PST